

Supplementary Note, Nov. 25, 1865.

The spot to which the above notices refer has been made the subject of careful observations by M. Chacornac, who has issued interesting descriptions and drawings of it from October 7 to October 16. The Rev. Mr. Howlett has also scrutinized the same object, and prepared drawings to October 17, the day when my first sketch was made. Thus we have for this spot observations through one rotation and a half, and we may perhaps have the pleasure of welcoming it again in a new form.—J. P.

III. “Notice of a Spot on the Sun, observed at intervals during one Rotation.” By JOHN PHILLIPS, M.A., LL.D., F.R.S., Professor of Geology in the University of Oxford. With Drawings. Received November 15, 1865.

On the 17th of October, 1865, at 2 p.m. the spot referred to had traversed a great portion of its arc, and was approaching the limb. It showed two large unequal umbræ, and in each of them a blacker nucleus. Between them were several small dark dots, partially coalescent. The edges of the umbræ were very irregular. In the smaller umbra two bright dots. Above the larger umbra (which appeared to the right in the telescope) was an exceptionally bright band, traversed by two dark threads ending in dark dots. This band crossed a part of the umbra, like a bridge, but itself was there traversed by a small bar. Four bright patches lay in the continuation of this facula toward the prolonged upper (apparently) extremity of the penumbra, which was itself more luminous than other penumbral parts. The penumbra had broken edges, and an interior mottling of small brighter and darker spaces directed variously toward the umbræ. The granulated surface of the sun with soft gleaming facular ridges was conspicuously seen, and tracts of darkly dotted surface were seen beyond each extremity and on one side (Pl. X. fig. 1).

Nov. 4, 9.45.—The spot had now returned by rotation, and was very distinctly seen amidst far extended clouds of bright faculae, though reduced to less than half its former dimensions. It retained the two umbral tracts; but it was now the left-hand tract which was the larger. Being about 15° from the limb, the general figure was oval, as usual; the umbræ were of irregular figure, the larger one cut into by bright branches from the interumbral space. Dark dots amidst the faculae on the border (Pl. X. fig. 2).

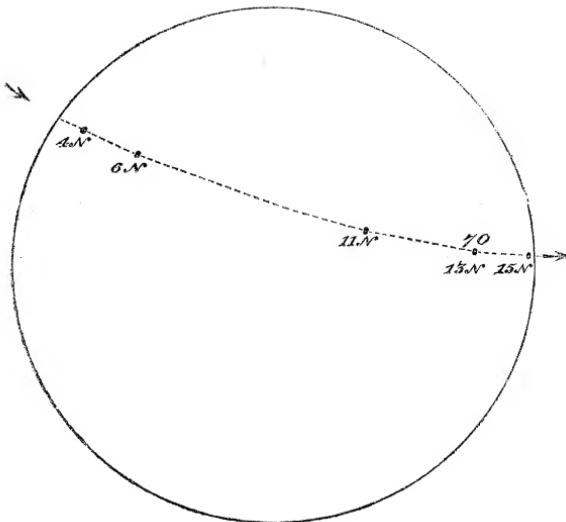
Nov. 6, 9.45.—The spot had reached about 45° from the edge, and appeared less elliptical, and otherwise changed in aspect. The large umbra was much dissected by bright streams, and the smaller one had assumed a distinctly tripartite shape. The edges of the penumbra appeared rugged. Many small spots and dark dots towards the edge of the disk (Pl. X. fig. 3)

Nov. 11, 9.45.—The spot had now passed the central meridian, and was greatly altered, and almost cut into two parts by a bright facular mass, passing between the umbræ. The larger of these is now in a pentagonal

form, and has a bright central speck, with a rather obscure narrow prolongation. The smaller umbra is tripartite, and has small gleaming points in it. Several black dots in the surrounding surface, amidst faculae, areolæ, and other structures very distinctly seen for a great part of this day with good definition (Pl. XI. fig. 4).

Nov. 13, 9.45.—Very great change in general figure and in the several parts of the spot. The larger spot is now cut in twain; the smaller spot is reduced to two dots, surrounded by a large bright space. The spot is now about 36° from the limb (Pl. XI. fig. 5).

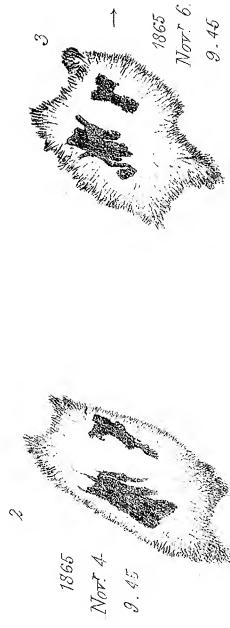
Nov. 15.—The spot is very near the edge, and of course almost elliptical in outline (Pl. XI. fig. 6). The faculae which accompany it are seen on a smaller scale in Pl. XI. fig. 7.



The woodcut shows the apparent places of the spot at the several dates mentioned.

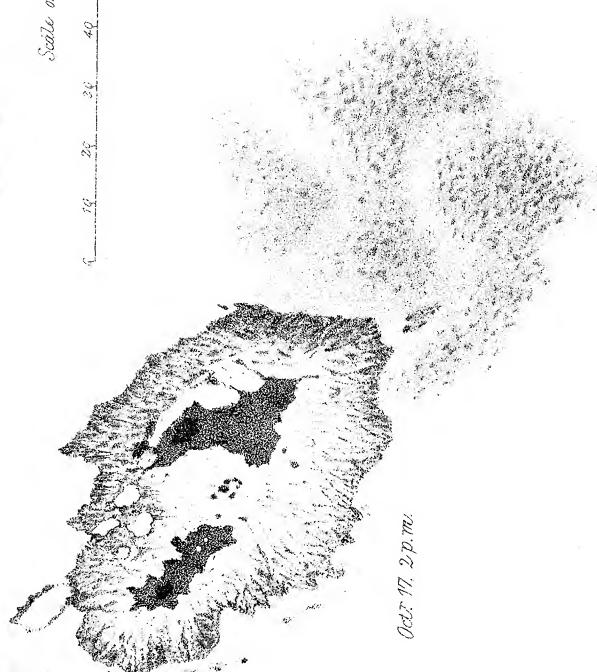
EXPLANATION OF THE FIGURES IN PLATES X., XI., XII.

- Pl. X. fig. 1. Appearance of spot near the edge of the disk before passing off.
- 2. Spot after reappearance, within the opposite edge of the disk.
- 3. The same farther on the disk.
- Pl. XI. fig. 4. The same after passing the centre of the disk.
- 5. The same advancing toward the edge.
- 6. The same very near the edge.
- 7. The same surrounded by faculae. This figure is drawn on a smaller scale than the others.
- Pl. XII. figs. 1, 2, 3, 4, 5. Sketches taken in October 1865.
- 6. Sketched in April 1864.



Scale of Seconds

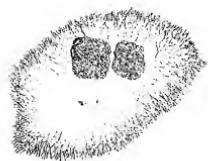
1 20 30 40 50 60 70 80 90 100



4



5

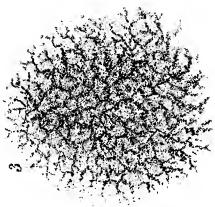
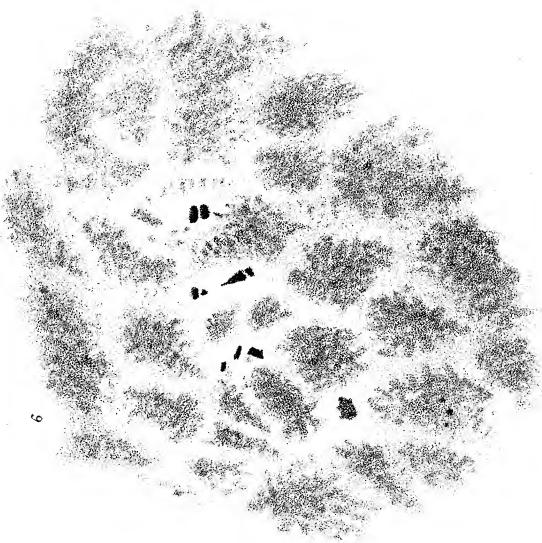
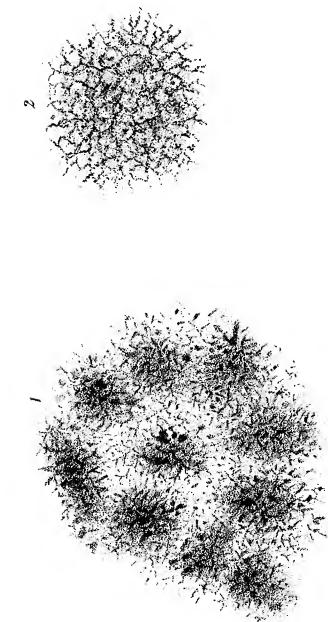


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7





Wind. N.W. Conway

J. Phillips ad nat. del.

J. Baileya idem



00' 17 2P 12



NCS
Hor 4
S. 48



NCS
Hor 5
S. 48

Table of Samples

1 2 3 4 5 6 7 8 9 10 11 12 13 14



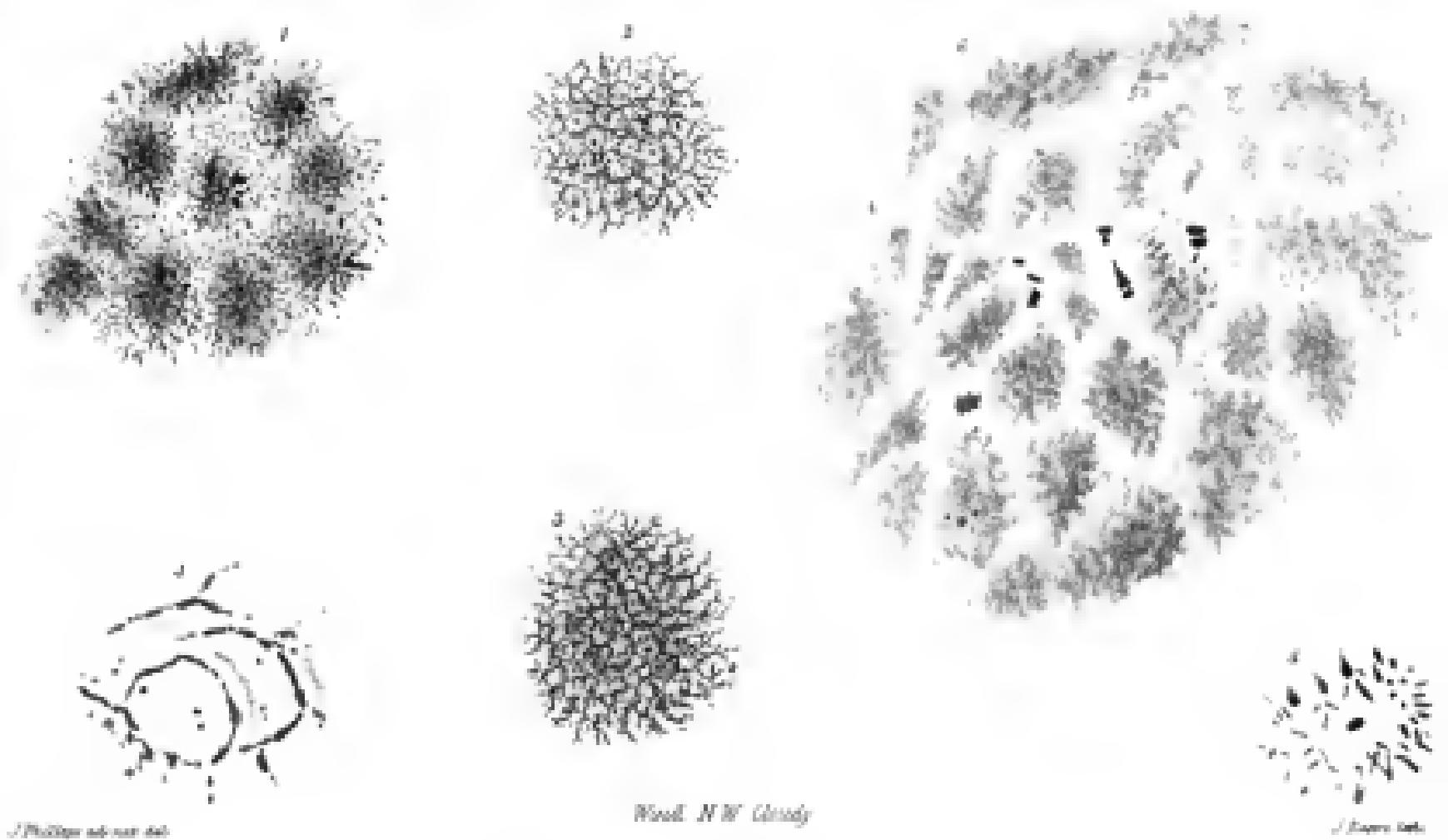
1844
Nov 11
2.45



1845
Nov 11
2.45



Dec 11
2.45



Wood NW. Cloudy